

AutoNaut Status - October 2018

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This document summarizes the status of the developments on the AutoNaut, after the visit of Joao Teixeira.

What was successfully tested:

- L1 - operator short-range communication for testing;
- Manual control of the AutoNaut;
- Fallback autopilot - success for 0 propeller speed;
- Other fallback behaviors;

Level 1 Status:

- Revision of the control approach for the Autopilot: the controller works fine (good tracking of 180deg COG) with propeller speed = 0, performances deteriorate increasing the speed - need to integrate speed changes;
- Integration of Iridium: testing of Iridium messages - generation of daily report to be sent to Operator - testing of all related functions is ongoing;
- Possibility to split AIS GPS coaxial cable and feed both L1 and L2 (?).

Level 2:

- GPS-based navigation still to be corrected in terms of Dune tasks;
- Testing and tuning of waypoint navigation with a heading provided by a magnetometer;
- 3G/4G communication turned out to be problematic - the usb modem we have is not compatible with GLUED - the modem used at LSTS is out of production and it would not allow GSM and 3G communication at the same time (still best option if we can somehow get one of those modems) - possibility to use a Portable Modem with the sim, providing internet connection via Ethernet or WiFi;

- Iridium Communication and Collision avoidance remain to be tested.